

REMARKS

In the present Amendment, claim 1 has been amended to incorporate the recitations of claims 2 and 3. In so doing, the recitation of an amino group has been omitted from the Markush group for the recited nonionic group. Claims 2 and 3 have been cancelled.

Claim 5 has been cancelled.

Claim 6 has been amended to replace the term “post-treatment” with the phrase “hydrolysis, quaternization or amine-oxide-forming treatment.” Section 112 support for this amendment may be found, for example, at page 34, lines 9-10 of the specification.

Claim 27 has been amended to depend from claim 1, instead of claim 5.

Claim 36 has been amended to recite that the high Tg is 25 °C or higher and the low Tg is 25 °C or lower. Section 112 support for this amendment may be found, for example, in the paragraph bridging pages 13 and 14 of the specification.

No new matter has been added, and entry of the Amendment is respectfully requested.

Upon entry of the Amendment, claims 1, 4 and 6-38 will be pending.

In Paragraph No. 1 of the Action, claims 36-37 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

The Examiner states that there is no definition for integer “n” in an (A-B)_n type multi-block copolymer.

Further, the Examiner states that Applicants use the phrases “a hard block A having a high glass transition point (Tg)” and “a soft block B having a low Tg.” Per the Examiner, it is not clear how “a low Tg” is related to a “high Tg”. The Examiner states that the terms “high”

and “low” without any limits or ranges for the glass transition temperature T_g make the A-block and B-block indefinite.

Regarding the definition of the integer “n”, Applicants respectfully traverse. Persons skilled in the art would understand that “n” in the phrase an “(A-B)_n type multi-block copolymer” is an integer of 2 or more.

With respect to the “high T_g” and “low T_g,” persons skilled in the art would understand what is meant by a “high” and a “low” T_g based on the description in the paragraph bridging pages 13 and 14 of the specification. Nonetheless, to address the Examiner’s concern and advance the prosecution, claim 36 has been amended to recite that the high T_g is 25 °C or higher and the low T_g is 25 °C or lower.

Accordingly, reconsideration and withdrawal of the §112 rejection are respectfully requested.

In Paragraph No. 3 of the Action, claims 1-5, 8-10, 15-16, 27, 29 and 34-35 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Matyjaszewski et al (U.S. Patent 5,807,937).

Applicants submit that this rejection should be withdrawn because Matyjaszewski does not disclose or render obvious the cosmetic polymer composition of the present invention.

As discussed above, Applicants in the present Amendment have incorporated the recitations of claims 2 and 3 into independent claim 1. And, as noted, the recitation of an amino group has been omitted from the Markush group of nonionic groups.

Polymers comprising a block composed of N-vinyl pyrrolidone, which is exemplified as a preferred monomer in Matyjaszewski et al, see column 16, line 67, are eliminated from the scope of the present invention by omitting the amido group. And, polymers comprising a block composed of 2-ethylhexyl acrylate or methyl methacrylate, see column 17, lines 1-2, which are mentioned in the Office Action by the Examiner, also are eliminated from the scope of the invention by specifying the hydrophilic group in the claim 1. Thus, the amendments to claim 1 clarify the differences between the present invention and Matyjaszewski.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the § 102(b) rejection of claims 1-5, 8-10, 15-16, 27, 29 and 34-35 based on Matyjaszewski et al '937.

In Paragraph No. 4 of the Action, claims 1-6, 14, 23-28 and 36 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by EP 766957.

Applicants submit that this rejection should be withdrawn because EP '957, like Matyjaszewski, does not disclose or render obvious the cosmetic polymer composition of the present invention.

Although the Examiner states in the Office Action that EP' 957 discloses a block copolymer produced by polymerizing an ethylenically unsaturated carboxylic acid monomer and a monomer moiety of an ethylenically unsaturated carboxylic acid ester, EP '957 at page 2, lines 33-37, states: "the object can be attained by using a block copolymer comprising a polysiloxane segment, a monomer moiety of an ethylenically unsaturated carboxylic acid and a monomer moiety of an ethylenically unsaturated carboxylic acid ester, the said copolymer being able to

produce by subjecting an ethylenically unsaturated carboxylic acid and an ethylenically unsaturated carboxylic acid ester to polymerization reaction in the presence of a polysiloxane containing azo group(s).” Applicants believe that the block copolymer of EP’ 957 consists of a block of the polysiloxane segment and a block formed by random copolymerization of the two monomers. According to the method of EP’ 957, random copolymerization of an ethylenically unsaturated carboxylic acid and an ethylenically unsaturated carboxylic acid ester are carried out. Blocks of these two monomers are not formed.

The bases for this conclusion are as follows:

1. According to the description of Reference Example 2 (on page 8) and Synthesis Example 1 (on page 9) in EP ‘957, at first, a polysiloxane segment was prepared, an ethylenically unsaturated carboxylic acid and an ethylenically unsaturated carboxylic acid ester were added to the prepared polysiloxane segment, and the mixture was subjected to polymerization reaction. According to such a process, random copolymerization as opposed to block copolymerization of the ethylenically unsaturated carboxylic acid and the ethylenically unsaturated carboxylic acid ester is always carried out.
2. EP ‘957 states at page 4, line 1 that a pair of square brackets “[]” means “**random structure.**” Although the complete phrase in question states that “[] means random structure including, for example, graft, block and other copolymerization structures,” see EP ‘957 at page 4, lines 1-2, no specific block copolymer comprising a block of an ethylenically unsaturated carboxylic acid monomer and a block of an ethylenically unsaturated

carboxylic acid ester is disclosed in EP '957, and only some specific methods to give random copolymers consequently are disclosed in EP '957.

In contrast to EP '957, the block copolymer of the present invention is obtained by carrying out block copolymerization. And the advantageous effects of the block copolymer of the invention as compared with a random polymer are shown explicitly in the specification. As shown in Table 1 at page 93 of the specification, the polymer Nos. P-1 to P-4, falling within the scope of the present invention, were much more excellent in various properties as compared to the polymer No. Pc-1, which is a random copolymer.

Present claim 6 is patentable over EP '957 for additional, independent reasons. As to present claim 6, the Examiner reasons that "the addition block polymer is within the scope of in further post-polymerization treatment." See page 5 of the Action. With due respect, Applicants do not agree with this reasoning. EP '957's inventors state that their copolymer is produced by subjecting an ethylenically unsaturated carboxylic acid and an ethylenically unsaturated carboxylic acid ester to polymerization reaction in the presence of a polysiloxane containing azo groups. See page 2, lines 35-37. Applicants do not see in this description anything that could be characterized as forming a block by post-treatment after polymerization. Further, as noted above, claim 6 has been amended to recite that the block copolymer includes at least one block formed by hydrolysis, quaternization or amine-oxide-forming treatment after polymerization.

Claims 14 and 23 are also patentable over EP '957 for independent reasons.

As to present claim 14, Applicants respectfully do not agree with the Examiner's reasoning at page 5, lines 1-4 of the Action, since claim 14 is referring to a separate anionic polymer (b1), and not to a repeating unit in the block copolymer itself.

Similarly, as to claim 23, Applicants respectfully do not agree with the Examiner's reasoning, stated in the middle of page 5 of the Action. Claim 23 refers to a separate silicone derivative (b6), and not to, for example, a polysiloxane segment in the block copolymer itself, as asserted by the Examiner.

Thus, the anionic polymer (b1) as set forth in claim 14 is different from the copolymer (a), and a silicone derivative (b6) as set forth in claim 23 is different from the copolymer (a) as well. The inventions as set forth in claims 14 and 23 are totally different from those described in EP '957.

In view of the above, reconsideration and withdrawal of the § 102(b) anticipation rejection of claims 1-6, 14, 23-28 and 36 based on EP '957 are respectfully requested.

In Paragraph No. 6 of the Action, claims 8-10, 15-16, 27, 29, 34-35 and 38 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over EP '957 as applied to claims 1-6, 14, 23-28 and 36 above and further in view of Matyjaszewski.

Applicants submit that this rejection should be withdrawn for the same reasons that the section 102 rejection of claims 1-6, 14, 23-28 and 36 based on EP '957 should be reconsidered and withdrawn. EP '957, which discloses a block copolymer having polysiloxane segments and segments of a random copolymer of an ethylenically unsaturated carboxylic acid and an ethylenically unsaturated carboxylic acid ester, does not teach or suggest the cosmetic polymer

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composition of the present invention, in which the block copolymer includes at least one block composed of a unit having a hydrophilic group which is selected from the specific anionic, cationic, nonionic, amphoteric ionic and semipolar groups recited in claim 1. Matyjaszewski does not make up for the deficiencies of EP '957.

In Paragraph No. 7 of the Action, claims 7, 11-13, 17-22, 30-33 and 37 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over EP '957 as applied to claims 1-6, 14, 23-28 and 36 above and further in view of Hayama et al (US Patent No. 6,123,933).

Applicants submit that this rejection should be withdrawn for the same reasons that the section 102 rejection of claims 1-6, 14, 23-28 and 36 based on EP '957 should be reconsidered and withdrawn. Hayama et al '933 does not make up for the deficiencies of EP '957 discussed above.

In Paragraph No. 9 of the Action, claims 7, 11-14, 17-28, 30-33 and 38 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Matyjaszewski as applied to claims 1-5, 8-10, 15-16, 27, 29 and 34-35 above, and further in view of Hayama et al.

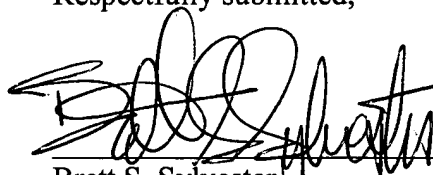
Applicants submit that this rejection should be withdrawn for the same reasons that the rejection of claims 1-5, 8-10, 15-16, 27, 29 and 34-35 based on Matyjaszewski should be reconsidered and withdrawn. Hayama et al '933 does not make up for the deficiencies of Matyjaszewski.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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